

Notice of Allowability

Application No.

10/784,828

Examiner

Kimnhung Nguyen

Applicant(s)

YUMOTO, AKIRA

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/11/07.
2. ☒ The allowed claim(s) is/are 4-6, 22, 24, 29-31, 34, 39, 41, 49-51, 54, 61, 69-74, 95-100, 102, 103, 107-110, 133-138, 140-143, 145-148 and 155-162.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 10/26/07
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

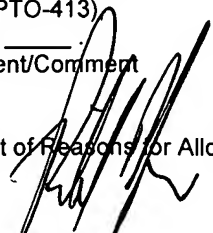
6. ☐ Interview Summary (PTO-413)

Paper No./Mail Date _____

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____


RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
U.S. PATENT AND TRADEMARK OFFICE

DETAILED ACTION

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Brian Dutton on 2/22/08.

Amendments To The Claims: 96, 97, 98, 103, 134, 135, 136 and 141.

Claim 96, line 1, after "claim", delete "93", and insert -- 95--.

Claim 97, line 1, after "claim", delete "66", and insert -- 95--.

Claim 98, lines 1, after "claim", delete "75", and insert --95--.

Claim 103, line 1, after "claim", delete "101", and insert --100--.

Claim 134, line 1, after "claim", delete "129", and insert --133--.

Claim 135, line 1, after "claim", deleted "104", and insert --100--.

Claim 136, line 1, after "claim", delete "113", and insert --107--.

Claim 141, line 1, after "claim", delete "139", and insert --138--.

2. This application has been examined. The claims 4-6, 22, 24, 29-31, 34, 39, 41, 49-51, 54, 61, 69-74, 95-100, 102, 103, 107-110, 112, 133, 134-138, 140-143, 145-148, 155-162 are allowed.

Allowable Subject Matter

3. The following is an examiner's statement of reasons for allowance: None of the cited teaches or suggests that a current drive circuit for supplying a drive current to a driven object, including a converting part for converting a current level of the fetched signal current to a voltage level and holding the same, and a drive part for converting the held voltage signal to a current signal and outputting the., drive current, wherein the receiving part includes a fetch use insulating gate type field effect transistor having control terminal, a first terminal, and a second terminal, the first terminal connected to a first terminal of the conversion use transistor the second terminal connected to the signal line, and the control terminal connected to the control line and the converting part includes a switch use transistor inserted between the first terminal and control terminal of the conversion use transistor as claims 1, 29, 39, 49, 69, 95,107; or a drive use insulating gate type field effect transistor connected between the reference potential and said driven object, a capacitor having a first electrode connected in common to a gate of said conversion use insulating gate type field effect transistor and a gate of said drive use insulating gate type field effect transistor and having a second electrode connected to the reference potential, and a switch use insulating gate type field effect transistor connected between a gate and drain of said conversion use insulating gate type field effect transistor and having a gate connected to said control line as claims 22, 137, 138; or a drive use insulating gate type field effect transistor connected between the reference potential and said driven object, a capacitor having a first electrode connected to a gate of said drive use insulating gate type field effect transistor and having a second electrode connected to a reference potential, and a switch use insulating gate type field effect transistor connected between a gate of said conversion use

insulating gate type field effect transistor and a connecting point of a gate of said drive use
insulating gate type field effect transistor and a first electrode of said capacitor and having a gate
connected to said control line, wherein a control terminal of said fetch use insulating gate type
field effect transistor and a control terminal of said switch use insulating gate type field effect
transistor are connected to different control lines as claim 24; or a fetch use insulating gate type
field effect transistor inserted between the drain of the conversion use insulating gate type field
effect transistor and the data line and having a gate connected to a scanning line, a drive use
insulating gate type field effect transistor connected between a reference potential and a light
emitting element, a capacitor having a first electrode connected in common to a gate of the
conversion use insulating gate type field effect transistor and a gate of the drive use insulating
gate type field effect transistor and having a second electrode connected to a reference potential,
and a switch use insulating gate type field effect transistor connected between a gate and drain of
said conversion use insulating gate type field effect transistor and having a gate connected to a
scanning line as claim 99; or a capacitor having a first electrode connected to a gate of the drive
use insulating gate type field effect transistor and having a second electrode connected to a
reference potential, and a switch use insulating gate type field effect transistor connected
between a gate of said conversion use insulating gate type field effect transistor and a connecting
point between a gate of said drive use insulating gate type field effect transistor and a first
electrode of said capacitor and having a gate connected to a scanning line: wherein the control
terminal of the fetch use insulating gate type field effect transistor and the control terminal of the
switch use insulating gate type field effect transistor are connected to different scanning lines as
claim 100; or an adjusting means for downwardly adjusting the voltage level held by the

converting part and supplying the same to the drive part to tighten the black level of the brightness of each wherein the drive part includes an insulating gate type field effect transistor having a gate, a drain, and a source, the converting part is provided with a capacitor connected to the gate of the thin film transistor and holding the voltage level, and the adjusting means comprises an additional capacitor connected to that capacitor and downwardly adjusts the level of the voltage to be applied to the gate of the insulating gate type field effect transistor held at that capacitor as claim 133; or wherein the converting routine includes a routine using a switch use insulating gate type field effect transistor inserted between the drain and the gate of the conversion use insulating gate type field effect transistor, in the routine, the switch use insulating gate type field effect transistor becomes conductive when converting the current level of the signal current to the voltage level and electrically connects the drain and the gate of the conversion use insulating gate type field effect transistor to create the voltage level with the source as the reference at the gate, and the switch use insulating gate type field effect transistor is cut off and separates the gate of the conversion use insulating gate type field effect transistor and the capacitor connected to this from the drain when the capacitor holds the voltage level as claim 142.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Correspondence

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimnhung Nguyen
February 21, 2008



RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
FEBRUARY 21, 2008